

Notice of Allowability

Application No.

10/782,715

Examiner

Chih-Ching Chow

Applicant(s)

ZATLOUKAL, KEVIN

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/18/05.
2. ☒ The allowed claim(s) is/are 1-55.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 43/05, 2/28, 4/7, 5/20/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 2/28/06
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


TUAN DAM
SUPERVISORY PATENT EXAMINER

Examiner's Amendment and Statement of Reasons for Allowance

1. This action is responsive to Applicant's amendment after final filed November 18, 2005.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Mr. David Xue, Registration Number 54,554, on February 28, 2006 for putting the claims in condition for allowance. Examiner adopted Mr. Xue's proposed amendment: claims 3, 12, 21, 30, 39, and 48 are amended as the attached Supplemental Amendment, facsimile transmitted dated 2/28/2006 facsimile.

Examiner's Statement of Reason(s) for Allowance

4. Claims 1-55 are allowed.
5. The following is an examiner's statement of reasons for allowance:
The prior arts of record: Faiman, teaches a "Constant-folding Mechanism in a Multi-language Optimizing compiler". Although it can interpret multiple programming languages, its "each front end scans and parses a source module containing source code for a programming language" only, whose each front end is language-specific and tailored for each different source language not source code in multiple languages as in the current invention. Jacobs, teaches multi-tier caching system in which a first cache is implemented in kernel or operating system space and a second cache is implemented in user or application program space. Laurer, teaches a new platform

desired to facilitate development of interoperable Web applications. Chan, teaches a tool for development assistance of multi-language source code. Stone, teaches providing a Unified Modelling Language (UML) diagram of a program for display in a graphical user interface". Abrams, teaches compilation of multiple source codes each written in a single language by reading an intermediate file generated by the other. Mitchell, teaches a multi-language programming environment including a variety of tools which all work together, which allows the use of Ada in mixed language programs in the VAX/VMS common Language Environment. And Humphries, teaches using Ada with other programming languages in the .NET environment; both Mitchell and Humphries' multi-language environment using the objects compiled in the library level. However, none of them, taken alone or in combination, teaches a system operable to perform a multi-programming-language compilation process for a computer program written in one or more computer programming languages, which comprising: a compiler framework operable to perform a programming language-independent portion of the compilation process on the computer program; a plurality of language modules, wherein each language module is operable to perform programming language-dependent portion of the compilation process on one of the one or more computer programming languages in the computer program and/or invoke another language module in the plurality of language modules via one of a plurality of language interfaces; and a said plurality of language interfaces, wherein each language interface is provided by one of the plurality of language modules to interact with the compiler framework and/or other language modules, in such a manner as recited in claims 1, 19, 37, and 55. And an information interface operable to permit each client in a plurality of clients to interact with the compiler framework; a plurality of clients operable to utilize the information interface to request the compiler framework to perform at least one of the following tasks: obtaining the language information produced by the plurality of language modules; and requesting

a service provided by the compiler framework, in such a manner as recited in independent claims 33 and 51.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 571-272-3693. The examiner can normally be reached on 7:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2192
March 02, 2006

CC



TUAN DAM
SUPERVISORY PATENT EXAMINER